Instructional Materials Analysis and Selection

Phase 3: Assessing Content Alignment to the Common Core State Standards for Mathematics

Grade 2





Phase 3:

Assessing Content Alignment to the Common Core State Standards for Mathematics

A project of

The Indiana Education Roundtable, The Indiana Department of Education, and

The Charles A. Dana Center at The University of Texas at Austin

2010-2011

Instructional Materials Analysis and Selection Assessing Content Alignment to the Common Core State Standards for Mathematics

This tool provides educators with a structured way to make informed decisions when selecting mathematics instructional materials. In particular, it can help you become more knowledgeable about the Common Core State Standards for Mathematics so you can select instructional materials aligned with these standards.

This resource can also be used with the Dana Center's larger 4-phase *Instructional Materials Analysis and Selection* toolset: Phase 1: Studying the Standards, Phase 2: Narrowing the Field of Instructional Materials, Phase 3: Assessing Subject-Area Content Alignment, and Phase 4: Assessing Vertical Alignment of Instructional Materials. The particular resource you hold is a phase 3 tool that has been customized for assessing the alignment of instructional materials with the Common Core State Standards for Mathematics. Note that in 2009, the Dana Center developed a similar tool for Indiana educators to use in analyzing the alignment of instructional materials to Indiana's Academic Standards for Mathematics.

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About the development of this resource

This tool, *Instructional Materials Analysis and Selection: Assessing Content Alignment to the Common Core State Standards for Mathematics*, draws on the Dana Center's nearly 20 years of experience in strengthening education and has been used extensively in Texas and, increasingly, other states, to help local school districts and schools select instructional materials aligned with their standards. Development and production of the Instructional Materials Analysis toolset was supported by the Charles A. Dana Center.

This resource consists of a set of 15 individual grade-level / course documents that span kindergarten through the third year of high school mathematics. There is a document for each grade from kindergarten through 8, and six documents for high school mathematics (one each for the three courses in the traditional high school pathway Algebra I, Geometry, Algebra II; and one each for the three courses in the integrated high school pathway Mathematics I, Mathematics II, and Mathematics III).* At the request of various states and other entities, the Dana Center has populated this *Instructional Materials Analysis and Selection* tool with standards from the *Common Core State Standards for Mathematics* for use by local districts in selecting instructional materials aligned with these standards.

Note that the copyright of the Common Core State Standards for Mathematics is held by the National Governors Association Center for Best Practices and the Council of Chief State School Officers (collectively, NGA Center/CCSSO). This use of the CCSS for Mathematics is done under the CCSS Terms of Use, available at www.corestandards.org/terms-of-use. Specifically, this work is done under the Terms of Use "non-exclusive, royalty-free license to copy, publish, distribute, and display the Common Core State Standards for non-commercial purposes that support the Common Core State Standards Initiative." For a complete copy of the Common Core State Standards for Mathematics as well as the CCSS for Mathematics, Appendix A: Designing high school mathematics courses based on the Common Core State Standards, go to www.corestandards.org/the-standards.

October 2010 release.

We welcome your comments and suggestions for improvements—please send to dana-txshop@utlists.utexas.edu or the address in the copyright section above.

About the Charles A. Dana Center at The University of Texas at Austin

The Dana Center works to raise student achievement in K–16 mathematics and science, especially for historically underserved populations. We do so by providing direct service to school districts and institutions of higher education; to local, state, and national education leaders; and to agencies, nonprofits, and professional organizations concerned with strengthening American education.

The Center was founded in 1991 at The University of Texas at Austin. We carry out our work by supporting high standards and building system capacity; collaborating with key state and national organizations to address emerging issues; creating and delivering professional supports for educators and education leaders; and writing and publishing education resources, including student supports. Our staff of more than 60 has worked with dozens of school systems in nearly 20 states and with 90 percent of Texas's more than 1,000 school districts. We are committed to ensuring that the accident of where a child attends school does not limit the academic opportunities he or she can pursue.

For more information about our programs and resources, see our homepage at **www.utdanacenter.org**. To access our resources (many of them free), see our products index at **www.utdanacenter.org/products**. And to learn more about our professional development—and sign up online—go to **www.utdanacenter.org/pd**.

^{*} For the high school course sequences, we relied on the Common Core State Standards Mathematics Appendix A: Designing High School Mathematics Courses Based on the Common Core State Standards, developed for the CCSS initiative by Achieve, Inc., which convened and managed the Achieve Pathways Group.

Acknowledgments

Unless otherwise noted, all staff listed here are affiliated with the Dana Center.

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Our thanks

We gratefully acknowledge the more than 100 school districts and thousands of educators who have informed the development of these resources.

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Introduction

Phase 1: Studying the Standards

Phase 2: Narrowing the Field of Instructional Materials

Phase 3: Assessing Mathematical Content Alignment

The purpose of Phase 3: Assessing Mathematical Content Alignment is to determine the degree to which the materials are aligned to the standards (content and processes). In Phase 3, participants conduct an in-depth review of the 2-3 instructional materials selected in Phase 2. The Phase 3 process requires selection committee members to use set criteria in order to determine a rating for each sample, to cite examples to justify their score for each sample, and to document standards that are missing or not well-developed in the instructional materials examined.

Implementation

As a whole group, selection committee members should practice applying the Phase 3 rubric. The purpose of the whole group practice is to promote inter-rater reliability and calibration.

In Phase 3 it is not important to analyze every page, section, or chapter of a resource. It is important to identify an area, topic, or big idea for the deep content analysis of Phase 3 (e.g. development of equivalent fractions, addition of whole numbers, development of proportionality...). The identified area, topic, or big idea will be used for all the instructional materials considered in Phase 3. The area, topic, or big idea can be identified through the use of student achievement data, curriculum priorities/challenges, or ideas that typically make up a greater portion of instruction in particular grade levels/courses. In most cases, Phase 3 will identify the one resource that is best aligned.

Step-by-Step Instructions

- 1. Use your current adoption to practice using the Phase 3 rubric. Select one big idea to focus your analysis (see note above for selecting the area, topic, or big idea).
- 2. Independently, committee members use their current resource, the identified big idea (and associated pages in that resource), and the Phase 3 rubric to score and document the extent to which the material (content and processes) aligns to the standards.
- 3. In small groups, committee members share their scoring and justifications. Small groups come to consensus on how the current resource would score on this big idea.
- 4. Each small group shares with the large group their score. Repeat the consensus building to generate a large group score on this big idea.
- 5. Clarify any misunderstandings about how to apply the rubric before committee members begin to use Phase 3 rubric on the selected materials.

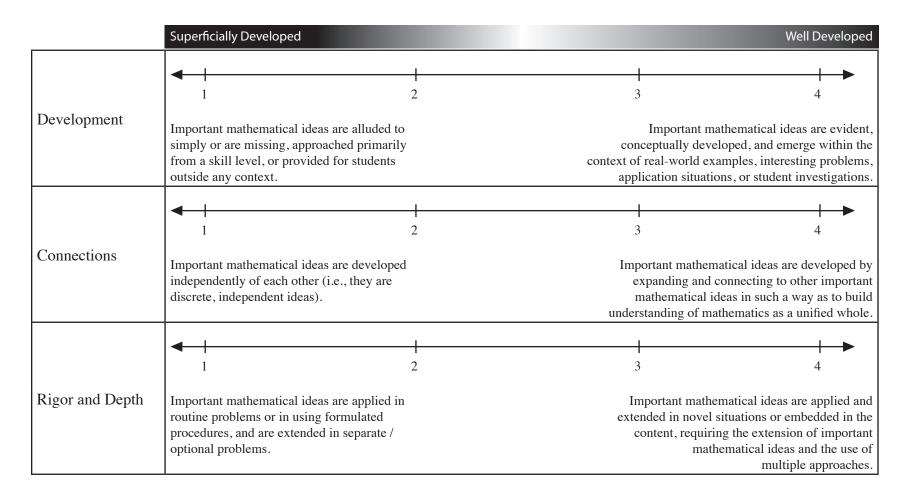
- 6. Based on the size of the selection committee, determine the number of areas, topics, or big ideas to be examined for each grade/course. If the group size is large, more areas, topics, big ideas can be examined within each grade level/course.
- 7. Make sure committee members have multiple copies of the Phase 3 rubric.
- 8. Committee members apply the Phase 3 rubric for each of the materials.
- 9. Establish a time line for groups to complete and submit Phase 3 documentation.
- 10. Establish a data collection and analysis process to attain a rating for each resource.

Materials and Supplies

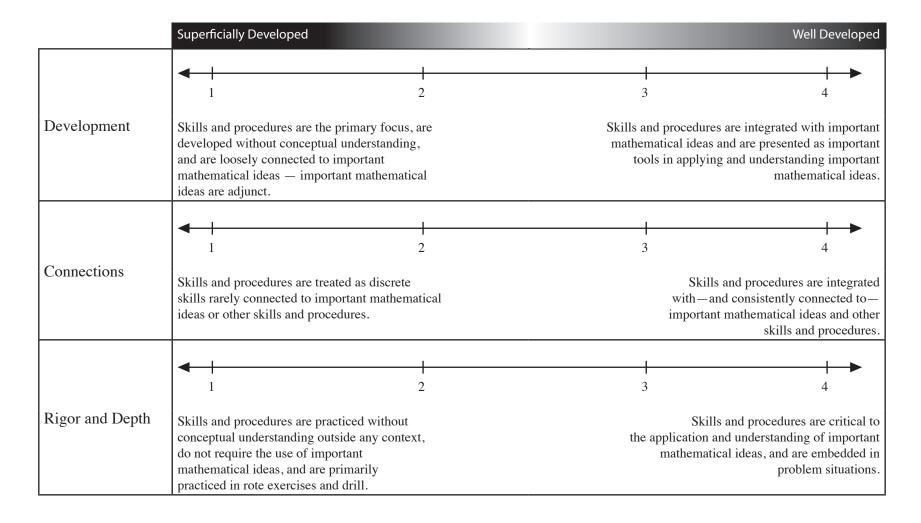
- Phase 3: Assessing Mathematical Content Alignment black line master multiple copies per person
- Currently used instructional resource
- The 2 to 4 instructional materials selected in Phase 2

Phase 4: Assessing Vertical Alignment of Instructional Materials

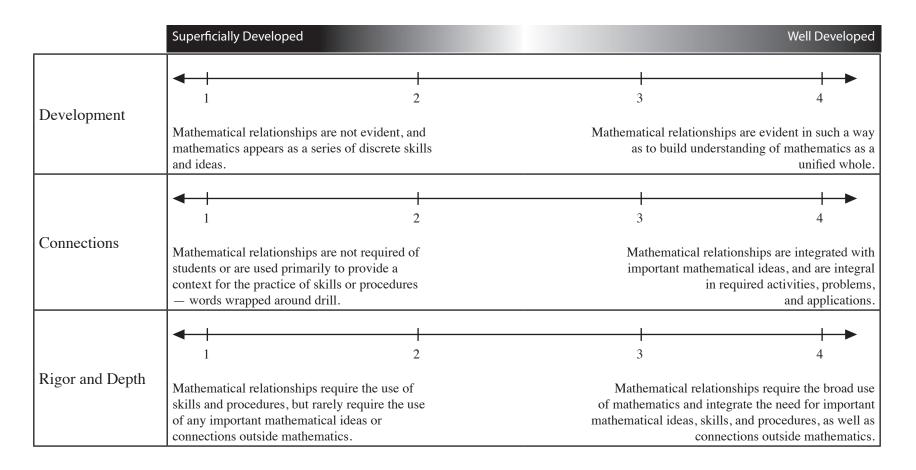
Important Mathematical Ideas: Understanding the scoring



Skills and Procedures: Understanding the scoring



Mathematical Relationships: Understanding the scoring



Reviewed By:	
Title of Instructional Materials:	

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and solve a problem. Mathematically proficient students check their answers to problems using a different method, and they continually ask themselves, "Does this make sense?" They can understand the approaches of others to solving complex problems and identify correspondences between different approaches.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

3

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Reviewed By:	
Title of Instructional Materials:	

2. Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a coherent representation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence



Reviewed By:	
Title of Instructional Materials:	

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Overall Rating

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence



Reviewed By:	
Title of Instructional Materials:	

4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence



Reviewed By:	
Title of Instructional Materials:	

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

1 2 3 4

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Title of Instructional Materials:	

6. Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence



Reviewed By:	
Title of Instructional Materials:	

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as 2 + 7. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence



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Title of Instructional Materials:	

8. Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1, 2) with slope 3, middle school students might abstract the equation (y-2)/(x-1)=3. Noticing the regularity in the way terms cancel when expanding (x-1)(x+1), $(x-1)(x^2+x+1)$, and $(x-1)(x^3+x^2+x+1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence

Reviewed By:	

Title of Instructional Materials:	
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Represent and solve problems involving addition and subtraction.	Summary and documentation met. Cite examples from the			ster, and stan	dard are
2.OA.1 Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using	Important Mathematical Ideas	1	2	3	4
drawings and equations with a symbol for the unknown number to represent	Skills and Procedures	1	2	3	4
	Mathematical Relationships	1	2	3	4
See Glossary, Table 1. Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Ev	vidence			
	Portions of the domain, clus developed in the instruction			e missing or n	ot well
	Overall Rating	1	1 2	3	4

Reviewed By:	
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Add and subtract within 20.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
2.OA.2 Fluently add and subtract within 20 using mental strategies.¹ By end of Grade 2, know from memory all sums of two one-digit numbers.	Important Mathematical Ideas 1 2 3 4
	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
See standard 1.OA.6 for a list of mental strategies. Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

Reviewed By:	
Title of Instructional Materials:	

Work with equal groups of objects to gain foundations for multiplication.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
2.OA.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2s; write an equation to express an even number as a sum of two equal addends.	Important Mathematical Ideas 1 2 3 4
	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

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Title of	Instructional	Materials.	
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Work with equal groups of objects to gain foundations for multiplication.	Summary and documentation met. Cite examples from the			ster, and stan	dard are
2.OA.4	Important Mathematical Ideas	4.1	1		1.5
Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.	important Mathematical Ideas	1	2	3	4
	Skills and Procedures	+			
		1	2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / Ev	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, clus developed in the instruction			e missing or n	ot well
	Overall Rating	4 1		1	
		1	2	3	4

Reviewed By:	
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Fitle of Instructional Materials:	
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Understand place value.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
 2.NBT.1a 1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: 	Important Mathematical Ideas 1 2 3 4
a. 100 can be thought of as a bundle of ten tens — called a "hundred."	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

Reviewed By:	
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Title of Instructional Materials:	
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Understand place value.	Summary and documentation met. Cite examples from the			ster, and stand	dard are
2.NBT.1b					
Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:	Important Mathematical Ideas	1	2	3	4
b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0	Skills and Procedures	 			→
tens and 0 ones).		1	2	3	4
	Mathematical Relationships	4			
		1	2	3	4
	Summary / Justification / Ev	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, clus developed in the instruction			missing or no	ot well
	Overall Rating	+			
		1	2	3	4

Reviewed By:	
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Understand place value.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
2.NBT.2 Count within 1000; skip-count by 5s, 10s, and 100s.	Important Mathematical Ideas 1 2 3 4
	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
	Summary / Justification / Evidence
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

Reviewed By:	

		1 Materials:	of Instructional	Title
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Understand place value.	Summary and documentation of how the domain, cluster, and standard armet. Cite examples from the materials.	e
2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.	Important Mathematical Ideas 1 2 3 4	→ í
	Skills and Procedures 1 2 3 4	→ í
	Mathematical Relationships 1 2 3 4	→ í
Indicate the chapter(a) coetion(a) and/or nego(a) reviewed	Summary / Justification / Evidence	
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):	
	Overall Rating 1 2 3 4	

Reviewed By:	
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Materials:
Materials:

Understand place value.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons.	Important Mathematical Ideas 1 2 3 4
	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

Reviewed By:	
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itle of Instructional Materials:	
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Use place value understanding and properties of operations to add and subtract.	Summary and documentation met. Cite examples from the			ster, and stan	dard are
2.NBT.5	Important Mathematical Ideas	4.1		1	1.
Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.	important Mathematical Ideas	1	2	3	4
	Skills and Procedures	+	-		
		1	2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / Ev	/idence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, clus developed in the instruction			e missing or n	ot well
	Overall Rating	4 1	1		
		1	2	3	4

Reviewed By:	
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Title of Instructional Materials:	
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Use place value understanding and properties of operations to add and subtract.	Summary and documentation met. Cite examples from the			ıster, and star	ndard are
2.NBT.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	1	2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / Ev	/idence	е		
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, clus developed in the instruction			e missing or r	not well
	Overall Rating	1	 2	1 3	4

Reviewed By:	
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Fitle of Instructional Materials:	
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Use place value understanding and properties of operations to add and subtract.	Summary and documentatio met. Cite examples from the		domain, clus	ter, and stand	lard are
2.NBT.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the	Important Mathematical Ideas	1	2	3	4
relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.	Skills and Procedures	1	2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / Evi	idence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, clus developed in the instruction			missing or no	t well
	Overall Rating	1	2	3	4

Reviewed By:	
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Use place value understanding and properties of operations to add and subtract.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
2.NBT.8 Mentally add 10 or 100 to a given number 100–900, and mentally subtract 10 or 100 from a given number 100–900.	Important Mathematical Ideas 1 2 3 4
	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
	Summary / Justification / Evidence
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

Reviewed By:	
-	

Use place value understanding and properties of operations to add and subtract.	Summary and documentati met. Cite examples from the			ster, and stan	dard are
2.NBT.9	Important Mathematical Ideas	+	1		
Explain why addition and subtraction strategies work, using place value and the properties of operations. ¹		1	2	3	4
	Skills and Procedures				+
		1	2	3	4
	Mathematical Relationships	1	2	3	4
Explanations may be supported by drawings or objects.	Summary / Justification / E	vidence			
Explanations may be supported by drawings or objects. Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, clu developed in the instruction			missing or n	ot well
	Overall Rating	1	1 2	3	4

Reviewed By:	
Title of Instructional Materials:	

Measure and estimate lengths in standard units.	Summary and documentati met. Cite examples from the			ster, and stan	dard are
2.MD.1 Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	1	2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, clu developed in the instruction			e missing or n	ot well
	Overall Rating	1	1 2	1 3	4

Reviewed By:	
Title of Instructional Materials:	

Measure and estimate lengths in standard units.	Summary and documentation met. Cite examples from the			ster, and stan	dard are
2.MD.2	Important Mathematical Ideas				
Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures				→
		1	2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / Ev	/idence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, clust developed in the instruction			missing or n	ot well
	Overall Rating	1	1 2	3	4

Reviewed By:	
Title of Instructional Materials:	

Measure and estimate lengths in standard units.	Summary and documentation of how the domain, cluster, and standard met. Cite examples from the materials.	are
2.MD.3 Estimate lengths using units of inches, feet, centimeters, and meters.	Important Mathematical Ideas 1 2 3	4
	Skills and Procedures 1 2 3	4
	Mathematical Relationships 1 2 3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence	
	Portions of the domain, cluster, and standard that are missing or not we developed in the instructional materials (if any):	ell
	Overall Rating 1 2 3	→ 4

Reviewed By:	
Title of Instructional Materials:	

Measure and estimate lengths in standard units.	Summary and documentation of how the domain, cluster, and standard ar met. Cite examples from the materials.	re
2.MD.4 Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.	Important Mathematical Ideas 1 2 3 4	→
	Skills and Procedures 1 2 3 4	→
	Mathematical Relationships 1 2 3 4	→ 4
	Summary / Justification / Evidence	
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):	
	Overall Rating 1 2 3 4	

Reviewed By:	
Title of Instructional Materials:	

Relate addition and subtraction to length.	Summary and documentation met. Cite examples from the			ster, and star	ndard are
2.MD.5	Important Mathematical Ideas	44	ı	I	
Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.		1	2	3	4
	Skills and Procedures	++			
		1	2	3	4
	Mathematical Relationships	++			+
		1	2	3	4
	Summary / Justification / Ev	videnc	ce		
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, clus developed in the instruction			e missing or r	not well
	Oursell Dating				
	Overall Rating			1	
		1	2	3	4

Reviewed By:	
Title of Instructional Materials:	

Relate addition and subtraction to length.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
2.MD.6 Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2,, and represent whole-number sums and differences within 100 on a number line diagram.	Important Mathematical Ideas 1 2 3 4
diagram.	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Reviewed By:	
Title of Instructional Materials:	

Work with time and money.	Summary and documentation met. Cite examples from the			omain, clus	ter, and stan	dard are
2.MD.7 Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	Important Mathematical Ideas	+	1	2	3	4
	Skills and Procedures	+	1	2	3	4
	Mathematical Relationships	+	1	2	3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Ev	vide	nce			
indicate the chapter(3), section(3), and/or page(3) reviewed.	Portions of the domain, clus developed in the instruction				missing or n	ot well
	Overall Rating	1		2	3	4

Reviewed By:	
Title of Instructional Materials:	

Work with time and money.	Summary and documentation met. Cite examples from the			ster, and stan	dard are
2.MD.8	Important Mathematical Ideas				
Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using \$ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	+	+		
		1	2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / Ev	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, cluded developed in the instruction			missing or n	ot well
	Overall Rating	1	2	3	→ 4

Reviewed By:	
Title of Instructional Materials:	

Represent and interpret data.	Summary and documentation met. Cite examples from the			ster, and star	ndard are
2.MD.9	Important Mathematical Ideas	4 I	1	ı	
Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.	Important Mattlematical Ideas	1	2	3	4
	Skills and Procedures	++	-		
		1	2	3	4
	Mathematical Relationships	++			+
		1	2	3	4
	Summary / Justification / Ev	viden	ce		
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, cluded developed in the instruction			e missing or r	not well
	Overall Detine				
	Overall Rating	+	1		→
		1	2	3	4

Reviewed By:	
Title of Instructional Materials:	

Represent and interpret data.	Summary and documentation met. Cite examples from the			ster, and stan	ard are
2.MD.10	Important Mathematical Ideas				
Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems¹ using information presented in a bar graph.	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures			-	
		1	2	3	4
	Mathematical Relationships	1	2	3	4
1 See Glossary, Table 1.	Summary / Justification / Ev	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cluded developed in the instruction			missing or n	ot well
	Overall Rating		 	3	4

Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 2 - GEOMETRY - 2.G

Reason with shapes and their attributes.	Summary and documentation met. Cite examples from the			ster, and stan	dard are
2.G.1	Important Mathematical Ideas				
Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	•			
		1	2	3	4
	Mathematical Relationships	1	2	3	4
Sizes are compared directly or visually, not compared by measuring. Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / E	vidence			
	Portions of the domain, clu developed in the instruction			e missing or n	ot well
	Overall Rating	4.1			
	o vo.an rading	1	2	3	4

Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 2 - GEOMETRY - 2.G

Reason with shapes and their attributes.	Summary and documentation of how the domain, cluster, and standard a met. Cite examples from the materials.					
2.G.2 Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.	Important Mathematical Ideas	1	2	3	4	
	Skills and Procedures	1	2	3	4	
	Mathematical Relationships	1	2	3	4	
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence					
maloute the enapter(e), section(e), unarer page(e) reviewed.	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):					
	Overall Rating	1	2	3	4	

Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 2 - GEOMETRY - 2.G

Reason with shapes and their attributes.	ne domain, clus	ster, and stand	ard are			
2.G.3						
Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words <i>halves, thirds, half of, a third of,</i> etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.	Important Mathematical Ideas	1	2	3	4	
equal shares of identical wholes need not have the same shape.	Skills and Procedures	4.1	ı			
		1	2	3	4	
	Mathematical Relationships	 				
		1	2	3	4	
	Summary / Justification / Evidence					
Indicate the chapter(s), section(s), and/or page(s) reviewed.						
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):				ot well	
	Overall Rating	1	2	3	4	